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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,530	03/23/2004	Alan T. Parsons	C0037	3437
21495	7590	10/26/2005		
CORNING CABLE SYSTEMS LLC P O BOX 489 HICKORY, NC 28603				
			EXAMINER PENG, CHARLIE YU	
			ART UNIT 2883	PAPER NUMBER

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/807,530	Applicant(s) PARSONS, ALAN T.	
	Examiner Charlie Peng	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-18, 20-35 and 39-42 is/are rejected.
- 7) ☒ Claim(s) 11, 19 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, filed 17 August 2005, with respect to the rejection(s) of claim(s) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found reference.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner suggest replacing a phrase on lines 6-8, [thereby forming a plurality of loops with the filament with either the tape or the at least one filament having a water-swellable component] with "thereby forming a plurality of loops with the filament, wherein either the tape or the at least one filament has a water-swellable component", or the like.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,574,400 to Lail. Lail teaches a fiber optic cable 10 comprising a plurality of optical fibers ribbons (which inherently comprises optical fibers/waveguides) 24 disposed within a tube 20, a dry insert made of water absorbent stripes (tapes) 38 and a plurality of core binder strands 26 (Fig. 1 clearly shows at least two) helically wrapping around a cable core 20 of the fiber optic cable 10, the stripes 38 are operative to swell and thereby block the flow of water in cable 10, and wherein the tapes 38 are deposited intermittently on at least portions of 26 by adhesive, i.e., they are attached via adhesive. (See at least **Fig. 1** and description) Since the strand 26 winds about the core 20 of the cable helically over its entire length, it must form a plurality of loops around the core part. Lail does not specify a range of optical attenuation of less than 0.3 dB/km, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such a range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to prevent substantial compression of the optical fiber and avoid optical attenuation.

With specific reference to claim 12, since the strand 26 and the strips 38, which form the dry insert, only surround the core part 20 intermittently, the height of the dry insert must vary from location to location.

2. Claim 3, 4, 7, and 8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 1. Lail discloses the claimed invention

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including a water-swellaable component **38** except for specific ranges of percentage of compression of the dry insert and a pull-out force between the dry insert and the tube, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to create a substantially large enough coefficient of friction and subsequently pull-out force between the optical waveguides and the dry insert (and indirectly the tube) so that the optical waveguides is not easily removed from its protective elements.

3. Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 1. Lail discloses the claimed invention except for a specific range of percentage of compression of the dry insert, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such a range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to limit the compression force between the optical waveguides and the dry insert (and indirectly the tube) so that the optical waveguides is not overly compressed, resulting in undesirable optical attenuation.

4. Claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 1 above, and further in view of U.S. Patent 5,621,841 to Field. Lail discloses the claimed invention except for a water-swellaable material used for the

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filament **26**. Field teaches that yarns **25** formed of water-swellaable material can help keep water from penetrating into an optical cable. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use yarns/filaments of water-swellaable property to replace those yarns that are not water-swellaable in constructing the optical tube. The motivation would be that such method accomplishes two purposes simultaneously: preventing water penetration and cushioning, thus reducing the overall size and cost of the optical tube.

5. Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 1. Lail discloses the claimed invention except for the maximum height of the dry insert. It would have been an obvious matter of design choice to limit the height of the dry insert since such a modification would have involved a mere change in the size of the component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). The motivation would be to limit the size of the tube and subsequently the overall fiber optic assembly made of such tubes.

6. Claims 15, 18, 23, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lail. Lail teaches the optical tuber except for a specific range of percentage of compression of the dry insert, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such a range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to create a substantially large

enough coefficient of friction and subsequently friction force between the optical waveguides and the dry insert (and indirectly the tube) so that the optical waveguides is not easily pulled out of its protective elements.

With specific reference to claim 26, since the strand 26 and the strips 38, which form the dry insert, only surround the core part 20 intermittently, the height of the dry insert must vary from location to location.

7. Claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 15. Lail discloses the claimed invention except for a specific range of percentage of compression of the dry insert that should not be exceeded, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such a range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to limit the compression force between the optical waveguides and the dry insert (and indirectly the tube) so that the optical waveguides is not overly compressed, resulting in undesirable optical attenuation.

8. Claim 17 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 15. Lail discloses the claimed invention except for a tape made of foam, which is widely available, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the foam tape as part of the dry insert. The motivation would be that physical properties of foam allow further cushioning function for the dry insert in addition to the filament loops.

9. Claim 20 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 15. Lail discloses the claimed invention except for a specific range of a pull-out force between the dry insert and the tube, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to create a substantially large enough pull-out force between the optical waveguides and the dry insert (and indirectly the tube) so that the optical waveguides is not easily removed from its protective elements.

10. Claim 22 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 15. Lail discloses the claimed invention except for the maximum height/thickness of the dry insert. It would have been an obvious matter of design choice to limit the height of the dry insert since such a modification would have involved a mere change in the size of the component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). The motivation would be to limit the size of the tube and subsequently the overall fiber optic assembly made of such tubes.

11. Claims 24 and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 15 above, and further in view of Field. Lail discloses the claimed invention except for a water-swellaable material used for the filament **26**. Field teaches that yarns **25** formed of water-swellaable material can help

keep water from penetrating into an optical cable. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use yarns/filaments of water-swellaable property to replace those yarns that are not water-swellaable in constructing the optical tube. The motivation would be that such method accomplishes two purposes simultaneously: preventing water penetration and cushioning, thus reducing the overall size and cost of the optical tube.

12. Claims 29, 32, 35, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lail. Lail teaches the optical tube with a water-swellaable dry insert part except for a specific range of pull-out force, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such a range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be that a substantially large enough pull-out force between the optical waveguides and the dry insert (and indirectly the tube) does not allow the optical waveguides to be easily pulled out of its protective elements.

With specific reference to claim 32, since the strand 26 and the strips 38, which form the dry insert, only surround the core part 20 intermittently, the height of the dry insert must vary from location to location.

13. Claims 30 and 31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 29. Lail discloses the claimed invention except for a specific range of a pull-out force between the dry insert and the tube, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to determine such ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to create a substantially large enough pull-out force between the optical waveguides and the dry insert (and indirectly the tube) so that the optical waveguides is not easily removed from its protective elements.

14. Claim 33 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 29. Lail discloses the claimed invention except for specific ranges of percentage of compression of the dry insert and a pull-out force between the dry insert and the tube, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to create a substantially large enough coefficient of friction and subsequently pull-out force between the optical waveguides and the dry insert (and indirectly the tube) so that the optical waveguides is not easily removed from its protective elements.

15. Claim 34 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 29. Lail discloses the claimed invention except for a specific range of percentage of compression of the dry insert, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine such a range, since it has been held that where the general conditions of a claim are disclosed in the

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prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would be to limit the compression force between the optical waveguides and the dry insert (and indirectly the tube) so that the optical waveguides is not overly compressed, resulting in undesirable optical attenuation.

16. Claim 37 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lail as applied to claim 29. Lail discloses the claimed invention except for the maximum height of the dry insert. It would have been an obvious matter of design choice to limit the height of the dry insert since such a modification would have involved a mere change in the size of the component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). The motivation would be to limit the size of the tube and subsequently the overall fiber optic assembly made of such tubes.

17. Claims 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lail as applied to claims 1 and 2. Claims 40 and 42 teach the method by which the apparatus disclosed in claims 1 and 2 is made. Although claims 40 and 42 are method claims, the structural limitations are met by Lail, as Lail also teaches an outer tube 40 made by a cross head extruder 125. The method(s) merely present the most obvious and logical way of constructing the optical tube, and are also rejected.

18. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lail as applied to claim 40 above. Lail discloses the claimed invention except for a cable jacket around the outside of the optical tube assembly. It is well known in the art to use

a cable jacket as claimed by the applicant, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a cable jacket. The motivation would be to provide an extra layer of protection to the optical fiber or act as an enclosing element for anything else placed outside the optical tube, such as a strength member.

Allowable Subject Matter

19. Claims 11, 19, and 36 are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Lail teaches the optical tube with a plurality of filaments 26 helically wrapped around the core part 20, however, Lail does not teach or suggest a reason for using a first type of filament and a second type of filament simultaneously upon the core part. It is the examiner's opinion that the prior art of record, taken alone or in combination, fails to disclose or render obvious, a second material for filaments or a second type of filament in the optical tube, in combination with the rest of the limitations of the base claim.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see PTO-892 for additional references cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charlie Peng whose telephone number is (571) 272-2177. The examiner can normally be reached on 9 am - 6 pm M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charlie Peng
October 24, 2005



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800